

REMARKS

Claims 18-33 and 37-41 are pending.

Rejection of Claims 18-33 and 37-41 Under 35 U.S.C. §103(a)

Claims 18, 21-32 and 37-41 are rejected under 35 U.S.C. §103(a) "as being unpatentable over Brehmer et al. (USPN 4,717,496) in view of Mobius (USPN 4,388,768)." In particular, the Examiner states that

Brehmer discloses a stiffening material, or composition, that is deformable at temperature between 50 and 80°C ... The composition is made with a polymeric material ... having a weight percentage of 20 to 70% and filler particles having diameters between 100 to 4000 microns The mixture is applied to woven or non-woven textile fabrics or onto shoe parts, and since the deformable material between 50 and 80°C, it would flow through the inherent openings in the material at ambient temperatures. However, Brehmer et al. fails to disclose the composition between two layers of sheet material, ... the filler being mica or talc

The Examiner later states that "Brehmer et al. discloses the claimed invention except for the polymeric material comprising poly(tetramethyleneadipate)."

Applicants respectfully traverse this rejection. As admitted by the Examiner in the first part of her rejection, Brehmer et al. do not teach or suggest several aspects of the claimed invention. For example, the claimed invention is directed to a shoe stiffener that includes a stiffener composition disposed between two layers of sheet material. The stiffener composition includes the polymeric material that is stiff at one temperature and is pliable, adhesive and flowable at an elevated temperature and which can pass through the openings of the sheet material. The openings in the sheet material have to be of a size sufficient to allow the stiffener composition to flow through them at elevated temperatures.

In contrast, Brehmer et al. disclose a powder material (i.e., filler and binder mixture) that may optionally be melted onto one or both sides of a substrate material such as a woven or non-woven material. See col. 2, lines 64-67 of Brehmer et al. Thus, unlike the claimed invention,

Brehmer et al. that the substrate material is disposed between two layers of stiffener composition. Moreover, Brehmer et al. provide absolutely no teaching or suggestion that the sheet material have openings of a size that allow a stiffener composition to pass through it. Therefore, Brehmer et al. do not teach or suggest the claimed invention.

The Examiner cites Mobius as disclosing

a knitted, non-woven or cloth, woven substrate ... as part of an inner that is porous and allows resin to flow through it (Column 1, lines 39-41 and Column 2, lines 40-45) in a shoe stiffener ... impregnated with a deformable resin ... mixed with talc or silica filler, mica ..., wherein the liner is attached to an upper to enclose the inner through adhesion for the purposes of forming a shoe stiffener that is impregnated with resin to make it resistant of sliding.

The Examiner then concludes that

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to provide different substrates, fillers and thickness in Brehmer et al. in order to form a shoe stiffener that is impregnated with a deformable resin and fillers to make it resistant to slipping and sliding as taught by Mobius.

Applicants respectfully traverse this rejection. As discussed above Brehmer et al. do not teach or suggest disposing a stiffener composition between two layers of sheet material. In fact, Brehmer et al. disclose the opposite arrangement. Moreover, Brehmer et al. make absolutely no mention of openings in the sheet material having to be of a certain size. The disclosure of Mobius et al. does not make up for these deficiencies. Mobius discloses a single layer structure made up of a single layer of fiber embedded with a resin, and optionally a filler. Thus, Mobius, like Brehmer et al., does not teach or suggest a stiffener composition disposed between two layers of sheet material. Thus, neither or these references, alone or in combination teach or suggest the claimed invention.

Moreover, Applicants respectfully disagree with the Examiner's assertion that there is motivation to combine the teachings of the Brehmer et al. and Mobius references. The focus of the Brehmer et al. reference is to use a binder to allow the processing of plastic fillers that due to

their melting properties cannot be processed alone. Throughout Brehmer et al., the only fillers are plastic fillers or plastic coated fillers. See column 2, lines 48-53 of Brehmer et al. Brehmer et al. go on to state that "one absolute prerequisite of the present invention is that the filler particles must not dissolve in the binder during the melting process, but remain in the form of essentially discrete bodies ... Only then can the favorable characteristics of the binder be retained." Thus, it is clear from a reading of Brehmer et al. that the selected fillers and binders are critical to the invention.

Mobius, on the other hand, does not even require a filler and, even when a filler is recited, it is not a plastic filler or plastic coated filler. Moreover, Mobius does not indicate that the resins used would be able to maintain the necessary qualities of the fillers disclosed by Brehmer et al.

The Examiner appears to ignore the teaching of Brehmer et al. Instead, the Examiner states that one would have used different fillers in Brehmer et al. in order to obtain the slip resistance of Mobius. This is simply not the case. As provided throughout Brehmer et al., an essential part of the invention is a particular type of filler, and properties of the filler. The Examiner has not pointed to anything in Brehmer et al. or Mobius that would suggest that the fillers disclosed in Mobius could replace the fillers used by Brehmer. This is contrary to what is disclosed in those references.

For the reasons discussed above, Applicants respectfully request that the Examiner withdraw this rejection.

Claims 19, 20, 22 and 33 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Brehmer et al. (USPN 4,717,496) in view of Mobius (USPN 4,388,768) as applied above, and further in view of Burgess et al. In particular, the Examiner states that

Brehmer et al., as modified with Mobius, discloses a stiffening composition between two layers of material made with a deformable polymeric material mixed with a filler. The layers of material are porous substrates made from knitted material, non-woven material or cloth. ...

Burgess et al. teaches an apertured non-woven fabric layer with openings of 0.1 to 0.3 mm² ... and a resin layer ... in a shoe stiffener for purposes of allowing the thermoplastic resin to flow through the fabric and act as a stiffening agent in the composite.

Applicants respectfully traverse this rejection. As discussed above, neither Brehmer et al. nor Mobius teach or suggest a shoe shiffner that includes a stiffener composition disposed between two layers of sheet material. Burgess et al. disclose a non-woven composite to be used as a shoe counter. The non-woven composite disclosed by Burgess et al. has one fabric surface which is not thermoplastic resin impregnated and therefore has a velvety surface and a second fabric surface which is impregnated with thermoplastic resin to make the shoe counter stiff. In addition, Burgess et al. make it clear that if an adhesive is to be used at all on the shoe counter, it is coated on the outside of one of the surfaces of the shoe counter. See, e.g., column 6, lines 45-52. There is nothing in the Burgess et al. references that teaches or suggests disposing a composition having adhesive properties between the two surfaces of the sheet material. Thus, the Burgess et al. reference does not make up for the deficiencies of Brehmer et al and Mobius. Therefore, Applicants respectfully request that the Examiner withdraw this rejection.

Enclosed is a check for the Petition for Extension of Time fee. Please apply any other charges or credits to deposit account 06-1050.

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